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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,096	02/03/2004	Philipp H. Schmid	M61.12-0620	2574
27366 7590 02/10/2009 WESTMAN CHAMPLIN (MICROSOFT CORPORATION) SUITE 1400 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402				
EXAMINER				
KOVACEK, DAVID M				
ART UNIT		PAPER NUMBER		
2626				
MAIL DATE		DELIVERY MODE		
02/10/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/772,096

**Applicant(s)**

SCHMID ET AL.

**Examiner**

David Kovacek

**Art Unit**

2626

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4-26 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-26 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is response to applicant's Amendment, filed 09/19/2008, in which the applicant makes minor amendments to **claims 1** and **4-26**, and presents arguments for patentability of the claims of the instant application over the prior art.

#### ***Response to Amendment***

2. The applicant's amendments to the formal conditions of **claims 1** and **4-26** have been considered and are accepted. It is noted by the examiner that no change in subject matter is rendered with these amendments and no new limitations have been added to any of the instant claims. It is noted by the examiner that formal acceptance of the conditions of the claims is not an indication of allowability of the claims over the prior art. Appropriate rejections are included in this Office Action in the relevant sections below.

#### ***Response to Arguments***

3. Applicant's arguments filed 09/19/2008 have been fully considered but they are not persuasive.

The applicant's principle arguments seem to be directed to disputing the assertion of the former Office Action that "although Gergic does not explicitly disclose the same accessing techniques for both object models, this is inherent in disclosing that each object model is encapsulated within a JavaBean, meaning that the same accessing methods will be available to each object model (Remarks of 09/19/2008: Page 7, paragraph 03)."

The applicant continues to argue that "'JavaBeans' are merely reusable software components for the Java programming language that can be manipulated visually in a builder tool. They are classes written to conform to a particular convention and are used to encapsulate many objects into a single object...There is no teaching or suggestion that the mere use of a JavaBean framework, as disclosed in Gergic, would inherently perform the same actions as recited in claim, namely accessing the speech-related object model and non-speech related object model using accessing techniques that are the same for both object models (Page 8, paragraph 03)."

The examiner first contends that in fact the broadest reasonable interpretation of the limitation of **claim 1** in question, wherein the speech-related object model and non-speech related object model are accessed using accessing techniques that are the same for both object model [emphasis added], can be interpreted by one of ordinary skill in the art to mean that the same *set of techniques* is available to access both types of object models. In this broadest reasonable interpretation of the claim to one of ordinary skill in the art, so long as the art teaches that said object models are accessible using the same set of

techniques, then that art will anticipate the limitation of **claim 1** in question. For these reasons, the examiner contends that inherency is a proper interpretation of the teachings of Gergic.

It is noted by the examiner that if the claim included specific reference to a single particular technique of access that the applicant's arguments would be more persuasive.

The examiner further notes that the teachings of Gergic are directed to JavaBeans, which as noted above, the applicant correctly admits are based upon the Java programming language, which is a well-formed object-oriented programming language with a finite number of possible implementations of object models. A *finite* number of implementations of object models is an inherent feature of *any* well-formed object-oriented programming language, such as Java, because there is no way to reliably implement a programming language that can anticipate an infinite number of future implementations. In this regard, the examiner contends that the implementation of JavaBeans, as taught by Gergic, do in fact comprise an inherent teaching that all object models, including both speech-related and non-speech related object models, can be addressed using the same finite set of accessing methods. Similar teachings can be found in the elementary teachings of the art regarding Java (Jaworski: Chapter 5, pages 89-97, in particular the section under the headings of "Classes" and "Encapsulation").

Similar arguments are presented by the applicant with respect to the limitations of **claim 6**, specifically the limitation the speech-related members and non-speech related members are designed to be specified and invoked in a consistent way. It is again noted by the examiner that the teachings of Gergic are based upon the well-formed object-oriented programming language of Java, and therefore inherently require that all members of objects be specified and invoked in a well-defined way as determined by the finite number of implementations of Java. It is further noted by the examiner that the broadest reasonable interpretation of "consistent" to one of ordinary skill in the art merely requires the same set of techniques be available to specify and invoke members of all types, as is taught by Gergic.

For at least these reasons, the applicant's arguments are non-persuasive.

All other arguments seem to be directed to one or more of the above arguments, and are therefore non-persuasive for the same reasons.

***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 1, 4-7, 26 and 30** are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Application Publication 2002/0198719, hereinafter referred to as Gergic.

Regarding **claim 1**, Gergic discloses a computer storage medium storing:

- a managed code layer [reusable dialog components, dialog framework, dialog beans] having a speech-related object model [interaction objects] comprising objects exposing speech-related members for use by speech-related applications (Page 21, paragraphs 0082, 0090),

Though not explicitly disclosed by Gergic, it is well known in the art that JavaBeans are used for implementing a managed code layer, in which computer program code (the dialog processes) are executed under the management of a virtual machine (the JavaBeans).

- the speech-related applications comprising one or more of speech recognition enabled applications and speech synthesis enabled applications [dialogs with the user], the speech-related members of the objects used in performing speech processing tasks ["dialog module" objects], comprising one or more of speech recognition and

speech synthesis [dialog] (Page 21, paragraph 0090; Page 23, paragraph 0112);

Though not explicitly disclosed by Gergic, the limitations of speech recognition and speech synthesis are each inherent in the disclosure of the use of VoiceXML.

- wherein the managed code layer also includes a non-speech related object model [service objects] comprising objects exposing non-speech related members for use by applications to perform non-speech related processing tasks [access data sources] (Page 21, paragraph 0082); and
- wherein the speech-related object model and non-speech related object model are accessed using accessing techniques that are the same for both object models (Page 21, paragraphs 0082-0090).

Though Gergic does not explicitly disclose the same accessing techniques for both object models, this is inherent in disclosing that each object model is encapsulated within a JavaBean, meaning that the same accessing methods will be available to each object model.

Regarding **claim 4**, Gergic discloses all limitations of **claim 1**, and further discloses that the non-speech related members exposed by a non-speech



related object in the non-speech related object model include methods [affect the state of the dialog], properties acted on by the methods [the dialog], and events triggered by a state of the non-speech related object [confirmation of success, failure, or completion] (Page 23, paragraphs 0109-0110).

Regarding **claim 5**, Gergic discloses all limitations of **claim 4** as applied above, and further discloses that the speech-related members exposed by a speech-related object in the speech-related object model include methods [process of dialogs, dialog logic], properties acted on by the methods [dialogs, fields], and events triggered by a state of the speech-related object [acoustic verification, content verification] (Page 23, paragraph 0112; Page 24, paragraphs 0114-0115).

Regarding **claim 6**, Gergic discloses all limitations of **claim 5** as applied above, and further discloses that the speech-related members and non-speech related members are designed to be specified and invoked in a consistent way (Page 21, paragraph 0082-0083).

This limitation is inherent in disclosing that each object model is encapsulated within a JavaBean, meaning that the same accessing methods will be available to each object model.

Regarding **claim 7**, Gergic discloses all limitations of **claim 1** as applied above, and further discloses that the speech-related object model includes a recognizer object configured to represent a speech recognizer [speaker identification] (Page 24, paragraph 0114).

Regarding **claim 26**, this claim is very similar to **claim 1**, and is rejected for the same reasons.

Regarding **claim 30**, Gergic discloses all limitations of **claim 26** as applied above, and further discloses that the speech-related objects include a dynamic grammar object that exposes members accessible to implement a dynamic grammar [beans can be used to dynamically compile grammars] (Page 4, paragraph 0053; Page 21, paragraph 0081).

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. **Claims 8-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gergic in view of US Patent Application Publication 2002/0055844, hereinafter referred to as L'Esperance.

Regarding **claim 8**, Gergic discloses all limitations of **claim 7** as applied above. Gergic additionally implies that a grammar object model is configured to represent a grammar (Page 4, paragraphs 0049, paragraph 0053; Page 21, paragraphs 0077-0078) in disclosing a dynamically generated grammar created using distributed object models encapsulated in JavaBeans.

L'Esperance discloses a grammar object configured to represent a grammar used by the recognizer object in recognizing speech [speech recognition process grammars] (Page 5, paragraph 0073).

The two references are combinable because each is directed to a dialog management system that makes use of distributed objects within a managed code layer. Though L'Esperance is directed to component object model (COM) objects, and Gergic is directed to JavaBean implementation, Gergic specifically discloses the similarities between JavaBeans and COM objects as managed code layer implementations (Page 21, paragraph 0078).

L'Esperance further provides motivation to combine in disclosing utility of a speech manager interface in order to provide access for other application processes to speech processing operations (Page 1, paragraph 0014 - Page 2, paragraph 0014).

Therefore, the examiner contends that it would have been obvious to one of ordinary skill in the art to combine the teachings of Gergic using the teachings of L'Esperance in order to implement a dialog management system using distributed

objects within a managed code layer that includes a speech manager interface in order to provide access for other application processes to speech processing operations.

Regarding **claim 9**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and Gergic further discloses that a speech-related object model [VoiceXML dialog bean] can include a result object to represent a recognition result [return results] (Page 21, paragraph 0090).

Regarding **claim 10**, Gergic in view of L'Esperance discloses all limitations of **claim 9** as applied above, and Gergic further discloses that the speech-related object model includes an events handler object [service objects] configured to handle events generated by recognizer object (Page 24, paragraphs 0115, 0119).

Regarding **claim 11**, Gergic discloses all limitations of **claim 7** as applied above. Gergic does not disclose, but L'Esperance discloses a local recognizer object [speech recognition process] controlled by a process [dialogue manager module] that instantiated the local recognizer object (Page 5, paragraphs 0073-0074).

Though L'Esperance does not exactly disclose the limitation of a process controlling an object, it is implied that the dialogue manager module controls the speech

recognition process by an additional module [speech manager 121], which is an analogous implementation.

The limitations of **claim 11** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 11** is the same as applied above to **claim 8**.

Regarding **claim 12**, Gergic in view of L'Esperance discloses all limitations of **claim 11** as applied above, and Gergic further discloses that the recognizer object comprises a system recognizer object shared by multiple processors [public resource, reusable dialog components] (Page 4, paragraph 0057-0059).

Regarding **claim 13**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and Gergic further discloses objects based upon XML [VoiceXML objects] (Page 4, paragraph 0049).

Regarding **claim 14**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and L'Esperance further discloses dictation grammar object representing a dictation grammar [language model 113] (Page 1, paragraph 0013).

The limitations of **claim 14** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 14** is the same as applied above to **claim 8**.

Regarding **claim 15**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and Gergic further discloses a dynamically created grammar object that is created at runtime (Page 4, paragraph 0053; Page 21, paragraph 0081).

Regarding **claim 16**, Gergic in view of L'Esperance discloses all limitations of **claim 8** as applied above, and L'Esperance further discloses that the grammar represented by the grammar object has semantic properties associated with rules therein [language model] (Fig. 1, element 117; Page 1, paragraph 0013).

The limitations of **claim 16** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 16** is the same as applied above to **claim 8**.

Regarding **claim 17**, Gergic in view of L'Esperance discloses all limitations of **claim 16** as applied above, and L'Esperance further discloses are that semantic properties are emitted based on one of a plurality of different mechanisms [language model, acoustic model] (Fig. 1, elements 115, 117; Page 1, paragraph 0013).

The limitations of **claim 16** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 16** is the same as applied above to **claim 8**.

Regarding **claim 18**, Gergic in view of L'Esperance discloses all limitations of **claim 17** as applied above, and Gergic further discloses that the speech-related object model exposes members to provide the semantic properties in a consistent form regardless of the mechanism used to emit the semantic properties [browser independent] (Page 20, paragraphs 0068-0069).

Regarding **claim 19**, Gergic discloses all limitations of **claim 1** as applied above, and further implies a speech synthesizer in disclosing a dialog object (Page 24, paragraph 0114). L'Esperance additionally discloses a voice object configured to represent a speech synthesizer [text-to-speech module] (Fig. 1, element 108; Page 5' paragraph 0074).

The limitations of **claim 19** are directly related to the motivation to combine the references as applied above to **claim 8**, and therefore the motivation to combine the references for **claim 19** is the same as applied above to **claim 8**.

Regarding **claim 20**, Gergic in view of L'Esperance discloses all limitations of **claim 19** as applied above, and Gergic further discloses synchronous [I/O processing] and non-synchronous [mixed-initiative] operation (Page 23, paragraph 0112; Page 24, paragraphs 0115, 0117).

Regarding **claim 21**, Gergic in view of L'Esperance discloses all limitations of **claim 19** as applied above, and Gergic further discloses specifying a synthesizer [Natural Language Generation processing object] based on voice characteristics [attribute value pairs] (Page 24, paragraph 0114).

Regarding **claim 22**, Gergic in view of L'Esperance discloses all limitations of **claim 19** as applied above, and Gergic further discloses that a speech-related object model includes an object representing attributes of a synthesized voice [<param> element](Page 23, paragraph 0105; Page 24, paragraph 0114).

Regarding **claim 23**, Gergic in view of L'Esperance discloses all limitations of **claim 19** as applied above, and Gergic further discloses a synthesis event handler [interaction object] configured to handle events generated by the voice object (Page 24, paragraphs 0115, 0119).

8. **Claims 24-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gergic in view of Beutnagel (US Patent 6,078,885), cited in a previous Office Action.

Regarding **claim 24**, Gergic discloses all limitations of **claim 1** as applied above. Gergic does not disclose, but Beutnagel discloses a first grammar object [dictionary 110] and second grammar object [dictionary of generator 105], wherein the first



grammar object has a rule referring to rules in the second grammar object (Col. 4, lines 19-21, 27-31; Col. 5, lines 45-56; Col. 8, lines 06-13).

The references are combinable because each is directed to a user-modifiable dialog system that allows for user speech input. Beutnagel further provides motivation to combine the references in disclosing the need for customization of phonetic dictionaries of a speech system to improve accuracy of the system in response to differing geological dialects (Col 1. lines 23-26).

Therefore, the examiner contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Gergic using the teachings of Beutnagel in order to implement a user-modifiable dialog system that allows for user speech input and further allows for customization of phonetic dictionaries to improve system accuracy in response to a geological dialect.

Regarding **claim 25**, Gergic in view of Beutnagel discloses all limitations of **claim 24** as applied above, and Beutnagel further discloses a maintenance component that updates the first grammar [recognition grammar, entering in dictionary] when the referred to rule in the second grammar changes (Fig. 1, element 120; Fig. 2; Col. 5, lines 45-46; Col. 7, line 67 – Col. 8, line 05).

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Kovacek whose telephone number is (571)270-3135. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R Hudspeth/  
Supervisory Patent Examiner, Art Unit 2626

01/28/2009